

Sage Notes



... promoting interest in
Idaho's native flora.

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2010 Annual Meeting: Friends, Field Trips, Fire, and Fun

By Janet Campbell, Patricia Hine, Nancy Miller, Nancy Sprague & Helen Yost

Along with their families and friends, over 55 members attended the successful 2010 Annual Meeting of the Idaho Native Plant Society (INPS), held this year at Heyburn State Park, near Plummer, Idaho, on Friday, June 11, through Sunday, June 13. Several participants arrived on Thursday to enjoy the deep forests and quiet waters of the reserved campground on Lake Chatcolet, while many members enthusiastically converged with their colleagues from across the state by Friday evening. Most members stayed through Sunday evening or Monday morning, participating in a dozen activities hosted by the White Pine Chapter. All of us who experienced this exuberant, sunny weekend together will remember the gathering as a bright spot in our shared quest to better understand and appreciate the bountiful natural wonders of Idaho and the good people who know and love its botanical treasures.



A white form of scarlet gilia (*Ipomopsis aggregata*) found in McCroskey State Park (Nancy Miller photo)

We all owe a debt of gratitude to the knowledgeable field trip leaders and diligent Annual Meeting Committee, who so graciously and effectively organized, hosted, and guided this event. Our sincere thanks go to Pam Brunsfeld, Kathy Hutton, Emily Poor, and Bill Rember for their understanding of area lands and generous leadership of field excursions. We also commend Reid Miller, for his provision of firewood and necessary group camping equipment, and the tireless planning committee members, Pam Brunsfeld, Janet Campbell, Patricia Hine, Nancy Miller, Bill Rember, and Nancy Sprague, for their arrangement and logistical oversight of reservations, speakers, field activities, species lists, and meals. Thanks to the hospitality of Park Managers Ron Hise and Leslie Naccarato, camp host Stan, and other helpful staff members of Heyburn State Park. All of us campers truly enjoyed our visit at the lake. But all of these festivities would not have been as wonderful without the overall support of INPS and White Pine Chapter contributors and the participation of scores of members from all over the state. On behalf of the White Pine Chapter, we greatly appreciate your attendance of the 2010 Annual Meeting and look forward to seeing you again at next year's event!..... *Continued on page 5*

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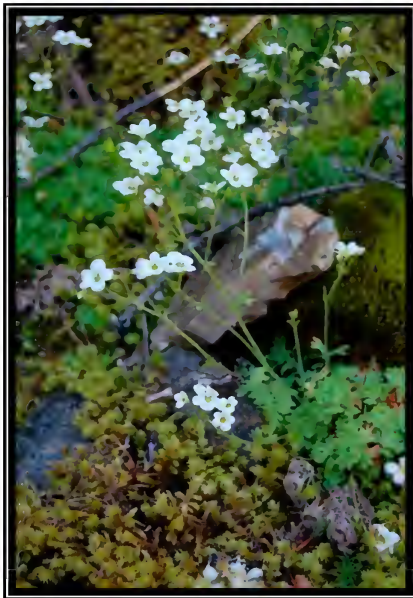
{Articles contributed to *Sage Notes* reflect the views of the authors and are not an official position of the Idaho Native Plant Society}

Letter from the President

Dear Society Members,

It is with joy and sadness that I am writing this as my last letter to the membership. At the Annual Meeting back in June, I announced that I will be stepping down as president on November 1, 2010. I will be 'surprise' having (we believe) a little girl in early December. My commitment to family, as always, comes first in life. If it were not for my husband and family, I would not have had the support to build my career and play an active role in plant conservation and education.

Some big changes that have happened since I took office in 2009 have impacted the Society. Our Sage Notes editor moved (Thanks Dylan for the continued support). We hosted the first Native Flora Workshop, we lost a chapter, and added a new chapter.



Saxifrage blooming in the damp cliffs over Big Creek (Nancy Miller photo)

Thanks to the White Pine Chapter and other Northern Idaho members for hosting a great Annual Meeting. I was surprised to see most of the chapters represented. The field trips were great and the guest speakers at dinner were very educational and entertaining. Thanks to all the leaders and organizers for a wonderful time!

I have guilt in my decision to step down as president because I will be leaving the Society in a hard position with no President or Vice-President. I do



Hooker's fairy-bells (*Disporum hookeri*) growing in the shady Hobo Cedar Grove understory (Nancy Miller photo)

want to express my heart-felt appreciation for both Nancy Miller and Jody Hull who each have been the strength behind the organization. Without these two wonderful ladies our group would be suffering greatly. I also appreciate the work that each of the chapter officers and other active members do to help keep INPS active and in the public view throughout the state.

For all of those that have dedicated your time and resources, thank you! For those that have ever thought about serving any role in supporting INPS and have not stepped-up yet, now is the time the Society is in the most need. Even the smallest role can go a long way in helping INPS stay a vital part of Idaho's conservation and education of native flora.

As my family "grows-up" I hope to again, one day, be able to play an active role in the INPS mission. Thanks again to those of you who have supported me over the last year and best wishes to the next round of officers!

Our last edition winner of the 'stamen in Sage Notes' was once again Gay Gilbert from the Upper Snake Chapter. I want to say thanks to all those who searched for the stamen and sent emails. I hope it was a fun twist that helped more people to read through Sage Notes and see what the rest of the group has done for Idaho's native flora.

Signing out for now,
Wendy Velman
INPS President

Chasing the Wild Mushroom

By Mal Furniss

White mushrooms have appeared overnight in our lawn in June during recent years. Not just anywhere. They seemed to be clustered near an ailing tree with dead branches in its crown, indicative of decaying roots ... just what such a saprobe might thrive on. They grew to an impressive 4 or 5 inches diameter in just a day or so and I finally decided to find out about their identity, wondering if they might be edible.

There is no shortage of books on the subject of mushrooms but I like *Mushrooms of North America* by Orson Miller, a mycologist, who was employed at one time at the Moscow Forestry Sciences Lab. He taught at Virginia Polytechnic Institute and has spent his summers in the west, centered at McCall. I also consulted former University of Idaho mycologist Ed Tylutki of Moscow who has taken many of us on mushroom forays in the neighboring forests and who confirmed the identity of the subject of this article.

I am familiar with identification keys, being a forest entomologist often called upon to identify bark beetles, but I admit to taking the short route by thumbing through the excellent color photos of Miller's book. First off, I was struck by the amazing range of forms and color of these fungi. My beetles hold their own in respect to their intricate, though miniature, anatomical structures but they come pretty much in shades of brown and black. Interestingly, perhaps the most striking example encountered in the photos is the deadly fly agaric mushroom, *Amanita muscaria*, which has a bright red cap with white warts. I wonder why? If meant to warn against eating it, why then does the equally poisonous "destroying angel," *Amanita virosa*, look similar to mushrooms in the genus *Agaricus* (meadow mushrooms) which are avidly sought for the table and commonly available in the market place?

Eventually, I came to Figure 210 which resembled the mushroom from my lawn. It being the horse mushroom, *Agaricus arvensis*, rated as choice table fare and a relative of the meadow mushroom, *A. campestris*, itself an antecedent of the cultivated variety sold in grocery stores. At this point, I referred to the written description to seek confirmation.

Right off, the common name, "meadow mushrooms," applied to agarics generally, and "horse mushroom" for this particularly large one, gave clues to its identity and a means of separating it from the poisonous *Amanitas*. The horse mushroom grows in more open environments and the gills (and spores) on the underside of the cap are pink at first, turning brown with maturity. In contrast, *Amanitas* grow commonly in the shade of the forest [*Amanitas* are generally mycorrhizal and form symbiotic connections with trees – ed.] and, more importantly, have white gills and spores.

Next, I compared the dimensions (large), shape, and surface characteristics of the cap and the stalk (stipe). After that point, the process got a bit more technical but, hey, when you're pondering whether to eat or discard a wild mushroom such detail provided more comfort than annoyance. The underside of the cap had gills, differentiating it from other fungi including those that have pores instead. The gills of the meadow mushrooms are said to be "free," meaning that they do not appear to join the stalk. Those of *Amanitas* clearly join the stalk.

My mushroom, however, had a remnant "veil," or ring, on the stalk in common with *Amanitas*. This ring, also called an annulus, is the remnant of where the cap was attached to the stalk in the juvenile "button" stage. As the cap expanded, it tore the membranous covering (veil) of the gills, leaving a ring. Another term, the "volva," refers to the swollen base of the stem that characterizes the *Amanitas* so despised by the epicurean; the base of meadow mushrooms is not so swollen but can form a small bulb and hence is not as reliable as other identifying features mentioned here.

The clincher for ruling out the *Amanitas* as far as I am concerned has to do with a "spore print" obtained by removing the stem and placing the cap gill-side-down on a piece of paper for an hour or so. As the microscopic

spores rain down, they leave a photo-like image of the gills. The spore print of the meadow mushroom is dark brown, whereas that of *Amanitas* is white.



(1) Agarics, or meadow mushrooms, like the “horse mushroom” shown here, appear “overnight” in lawns of the Palouse area in late spring. At first, they have a “button stage” like that on the left. As the cap grows and opens (2), the “veil” covering the gills on the underside tears, leaving a ring (3). The color of spores on a spore print (4) helps to identify certain mushrooms; spores of this flavorful agaric are pink at first, becoming dark brown at maturity. As mushrooms mature, they are increasingly subject to infestation by larvae of fungus gnats (5); look for their presence by breaking open the cap to examine the fleshy part to which gills are attached.



Editor's note: Keying *Agaricus* mushrooms to genus is generally straightforward based on the characteristics listed above. However, distinguishing between species takes much more skill. A number of *Agaricus* species are toxic, so certainty in identification is paramount. As far as collecting wild mushrooms for consumption is concerned there are many species of mushrooms that can be more reliably identified than members of the *Agaricus*. If you are inexperienced in the art/science of mushroom identification it is best to do as Mal did, and consult with an expert. There are several mushroom inclined groups in Idaho. Look up the Southern Idaho Mycological Society, Northern Idaho Mycological Association, or the Palouse Mycological Association for more info.

For a time, I confess, I was considering the popular meadow mushroom, *Agaricus campestris*, as a candidate but Ed Tylutki provided two characters to separate it from the horse mushroom. The latter stains yellow with age or bruising and its stalk is solid; the former does not turn yellow and, viewed in cross section, its stem has a hole at its center. Also, *A. campestris* comes along later, perhaps in mid-August. Whatever the case, either fills the bill wherever a dish calls for the flavor of a mushroom.

Not emphasized in some books is that wild mushrooms quickly become infested with larvae of fungus gnats. Appropriately, these miniature flies belong to the family Mycetophilidae (literally “fungus loving”) and the adults are somewhat similar in appearance to mosquitoes. You need to break open the stalk and cap to look for larval tunnels; they present no external clue to their presence. The likelihood of a mushroom being infested increases quickly with age. But take heed that, in their juvenile “button stage,” meadow mushrooms can be difficult to identify with certainty. At least, there should be a more mature, opened, specimen close by and the gills should match in color those of the mature ones. Incidentally, I wonder if the fungus gnats pay any attention to whether their mushroom host is red or some other color and, if not, what do they do about the various toxins present in species such as the fly mushroom, *Amanita muscaria*?

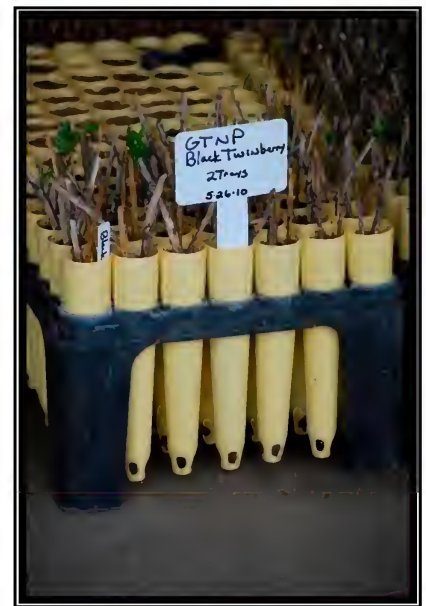
.....Continued from page 1: 2010 Annual Meeting

Plants of the Wild Tour

On Friday afternoon, June 11, INPS members and guests drove through the heart of the inland northwest Palouse Prairie and just over the border into eastern Washington, to visit Plants of the Wild facilities outside the town of Tekoa. This sprawling nursery complex has specialized in cultivating high quality native plant material for restoration and reclamation projects since 1979. The dozen or so employees propagate and cultivate species that are difficult to produce and provide large quantities of plants for reclamation projects as well as container-grown native seedlings to meet recent increases in demand for low-maintenance, water-conserving, naturalized home landscapes.

Kathy Hutton showed us through several adjacent and huge greenhouses where workers grow starts of a remarkable array of native grasses, forbs, shrubs, and trees that they ship all over the world. We marveled at the diminutive seedlings growing in vast rows of plug containers of various heights and widths, beneath yards of hoses and sprinklers. Among many other plants, we examined beargrass, Indian blanketflower, and big leaf lupine sharing space with sword ferns, purple coneflowers, and wild ginger. In nearby greenhouses, native grasses such as bluebunch wheatgrass, Idaho fescue, and tufted hairgrass or small shrubs like rabbitbrush, creeping Oregon grape, even mountain huckleberry raised their leaves into the humid air moderated by fans and giant swamp coolers. Kathy explained how staff members pot seeds, transfer seedlings, and weed the plant inventory that customers can inspect and gather for purchase on-site. She also discussed how the operation warms and cools its native plants throughout the seasons and prepares them for storage and transport. Perhaps most intriguing, however, was Kathy’s description of the complicated process that company workers employ to locate and arrange for collection of seeds from specific sources or locations, to fulfill project requests for particular plants.

Wandering outside into the intense Palouse sunlight, we noticed hundreds of more mature native shrubs and trees flourishing in crowded rows of large pots. Intermingled with spindly willows, black cottonwoods, ponderosa pines, and western larches, slim bushes of serviceberry, syringa, red osier dogwood, and silver buffaloberry huddled in containers. Commenting on the wide variety of appropriate habitats represented by these species, we discovered that these plants ultimately bring some natural beauty and wildness back to altered environments in places ranging from the Great Basin to the Pacific



Native seedlings developed in the Plants of the Wild nursery for a restoration project (Nancy Miller photo)

Northwest. Many of us tour participants lastly selected a few plants from the nursery stock, to later enjoy in our own native plant gardens, and headed for the office and our vehicles and a beautiful ride back to the park, among clear, blue skies, puffy, white clouds, and the green, rolling Palouse hills.

Statewide Potluck and Campfire

By Friday evening, June 11, most of the attending INPS members and their families had arrived, found their camping spots, and set up their home away from home at Heyburn State Park. At a centrally located campsite near some of the White Pine Chapter hosts, dish after dish of homemade casseroles, salads, breads, and desserts appeared, as the cooking skills of our peers revealed themselves in the most sumptuous of the annual meeting meals. Bratwurst sausages, supplied by the local chapter and grilled by Reid Miller, complemented this smorgasbord of a potluck, around which we huddled at picnic tables and in camp chairs, sharing our stories of the past year. Some of the meeting organizers introduced new members and officers and announced the gathering places and times of field trips and meetings over the next few days. As the last slanted rays of sunlight dwindled among the tall conifers shading the campground, we lit a large campfire, imbibed some beverages, and got to know or reconnect with our colleagues from around the state. Soon the fullness of our stomachs and the weariness wrought by long drives, or the colorful beauty of a lakeside sunset and the chill of a star-sparkled night, dispersed us to our separate walks and camps for relaxation well deserved by all of the participants.

Mary McCroskey State Park Field Trip

An early Idaho pioneer, Virgil McCroskey, bought the land comprising this park, small parcel by small parcel, then dedicated it to his mother and donated it to the state of Idaho in 1955. But the state was reluctant to assume responsibility for this diverse landscape, so McCroskey maintained the park at his own expense and efforts for another 15 years until his death at age 93. Led by Pam Brunsfeld of the University of Idaho Stillinger Herbarium on Saturday, June 12, our tour of his land, now a state park, began at the intersection of Skyline Drive and Highway 95, about ten miles north of Potlatch. Skyline Drive follows a steep ridge through the park and offers panoramic views of the Palouse Prairie and surrounding mountains in all directions. Because the cold, rainy, spring weather had just ended before our field trip, the vistas across the green countryside were spectacular.

Our group of more than 30 native plant enthusiasts stopped numerous times along the drive to explore the changing ecotones – from cedar/hemlock at 3300 feet elevation, up through Douglas-fir/white pine and ponderosa pine, to Palouse prairie – before winding our way back down to Highway 95 south of Tensed. At the higher elevations, we walked through some impressive forested zones and especially enjoyed seeing some large and very healthy-looking Douglas-fir (*Pseudotsuga menziesii*), western white pine (*Pinus monticola*), and western larch (*Larix occidentalis*). We also saw abundant wildflowers everywhere, along with coastal disjunct species like bittercherry (*Prunus emarginata* var. *emarginata*) and regional endemics such as clustered green gentian (*Frasera fastigiata*). As we moved westward into the more open country, the grasslands presented a wide variety of forbs to observe and one especially lovely carpeting of kitten ears (*Calochortus elegans*). Other highlights of our tour included a white variety of scarlet gilia (*Ipomopsis aggregata*) and several patches of mountain lady's slipper orchids (*Cypripedium montanum*) toward the end of the drive.

Clarkia Fossil Beds and Hobo Cedar Grove Field Trip

While some of the meeting participants explored the ever-evolving botanical transitions of McCroskey Park, a few dozen members and their families investigated the seemingly immutable, ancient, and colossal stalwarts of the past: extensive fossil beds and giant cedars. On Saturday morning, June 12, Dr. Bill Rember once again extended his hospitality and shared his expertise as he led meeting attendees to one of the Lake Clarkia fossil sites located on his property. The group first stopped along the highway south of Saint Maries, where Bill explained how lava flows exposed in the road cut had dammed a river drainage and formed Lake Clarkia about 15 million years ago. We then drove along the current St. Maries River to his land between Ferndale and Clarkia.

Surrounded by pines and Douglas-firs, Bill's house overlooks a marsh that is home to many birds and animals. We enjoyed the rattle cry of a belted kingfisher, the winnowing and short flights of Wilson's snipes, and the varied sounds of nesting redwing blackbirds among others. Dr. Rember first described how the sediment beds full of

fossils had formed. To assist our exploration, he dug out a section of one bed and demonstrated the best methods of separating the clay layers to access fossils and how to wrap our finds in newspaper for transportation. No matter how many times we started to cut into a rock, we excitedly anticipated (hopefully) finding a fossil hidden there. Some specimens contained several layers of fossils – sometimes a leaf, sometimes a bud, sometimes a fir, pine, or juniper sprig – even grains of pollen, the hardest to see without a microscope.

The flora represented by the fossils we found is long extinct in western North America, where the environment 15 million years ago was similar to present-day central China or the southeastern United States. We found fossils of angiosperms, such as magnolia, alder, and sycamore, alongside gymnosperms like yew, spruce, fir, and dawn redwood. Some of the fossils that we unearthed were actual fossils, but others held the original plant material that began to oxidize immediately upon exposure to air. Even searching through the piles of rejected pieces sometimes



Bill Rember demonstrates how to separate clay layers to access Lake Clarkia fossils (Nancy Miller photo)



Dr. Rember shows field trip participants the intricate structures of a Lake Clarkia fossil (Nancy Miller photo)

revealed a treasure, such as a small fragment of Chinese water pine. Most of the participants left this rich site with several fossils that continue to remind them of this extraordinary experience. For more information and photos of the Lake Clarkia fossils, see the February 2010 Sage Notes or the website <http://www.mines.uidaho.edu/~tertiary/>.

On Saturday afternoon, most of the group followed Bill to the Hobo Cedar Grove Botanical Area above Clarkia in the Idaho Panhandle National Forest. Only days before the field trip, heavy rain had made the road to the grove greasy and dangerous, and the Forest Service had only recently cleared the trails. Because this was the late spring excursion that almost did not happen, we felt fortunate to have the opportunity to explore this special place. Upon arrival, we met the trip botanist, Emily Poor, and enjoyed a picnic lunch.

On the edges of the cedar grove, we saw many types of shrubs, such as huckleberry (*Vaccinium* species), elderberry (*Sambucus* species), and western thimbleberry (*Rubus parviflorus*), and trees like Pacific yew (*Taxus brevifolia*), Engelmann spruce (*Picea engelmannii*), and western larch (*Larix occidentalis*). But the quiet, shaded, relatively open understory of the grove itself delighted us most as we hiked the two loop trails. Dominant among the understory plants, lady fern (*Athyrium filix-femina*) carpets large expanses of the forest. In addition to other types of ferns, the area boasts many forbs such as queen cup beadleily (*Clintonia uniflora*), western meadowrue (*Thalictrum occidentale*), and Hooker's fairy-bell (*Disporum hookeri*). We noticed other old-growth associated plants too numerous to mention except in a species list, which chapter officers will post on the White Pine website under Plant Lists.

This grove of ancient western redcedar trees (*Thuja plicata*), which were only seedlings when Columbus landed in North America, serves as an example of a stable, late successional forest that has remained intact for several reasons. Surrounding stands were cut 80 to 90 years ago for western white pine logs, which were floated down nearby Hobo Creek to lower elevations. Cedar logs tend to shred when exposed to rocks and water and are generally too large to transport this way. Fortunately, no other means of hauling cedar out of these forests were available at the time, and the area has also escaped recent fires.

Membership Dinner, Presentation, and Meeting

On Saturday evening, members converged in the park at the historically significant Chatcolet Shelter, a solid, stone-and-wood structure constructed by Civilian Conservation Corps (CCC) workers in the 1930s. Amid dappled sunlight on sprawling lawns overlooking Lake Chatcolet, we feasted on smoked salmon, barbecued chicken, beans, salads, and garlic bread catered by Porky's Barbecue of Pullman, Washington. While mingling after dinner, we enjoyed homemade brownies and cookies, ice cream, and tea offered by local chapter officers.

The featured speaker of the annual meeting was ethnobotanist Todd Ott, a Department of Forest Resources Ph.D. candidate at the University of Idaho who taught us that botanical knowledge can prove a tremendous asset for outdoor survival skills. His presentation focused on techniques for making fire and cordage and emphasized that survival is reliant on familiarity with the particular plant species in an area: knowing where to find plants and how to identify and choose the most suitable materials for various uses. Todd's background in both botany and chemistry was apparent in his explanations of the reasons behind some plant selections.



INPS visitors of the Hobo Cedar Grove marvel at giant, ancient, western redcedar trees (Nancy Miller photo)



INPS members and guests share the catered 2010 Annual Meeting dinner at Chatcolet Shelter (Nancy Miller photo)

First, Todd showed how to weave reverse twisted cordage for a fire bow drill strung with stinging nettle (*Urtica* species) or dogbane (*Apocynum canibinum* or *A. androsaemifolium*) or other excellent herbaceous sources of strong fiber such as *Agave*, *Linum*, *Asclepias*, and hemp. He fascinated us with his expertise, as he further explained how to create the set of tools needed for lighting a friction fire: a hard spindle (either a bow drill or a hand drill) and a fireboard of softer wood that releases small dust particles with friction and does not contain volatile resins. In north Idaho, western redcedar (*Thuja plicata*), black cottonwood (*Populus trichocarpa*), white alder (*Alnus rhombifolia*), and decayed Rocky Mountain maple (*Acer glabrum*) make ideal bow drills. The shredded inner bark

of western redcedar also yields effective tinder, which can alternatively be gathered from dried ocean spray flower heads (*Holodiscus discolor*) or cattail down mixed with grasses or the outer bark of paper birch (*Betula papyrifera*) that burns even when wet. Todd's demonstration proceeded dramatically, as he energetically utilized a bow drill to produce a wisp of smoke and some embers, which he transferred to a cluster of tinder held in his hands and blew on until bright orange flames burst into the cool air.

Concluding his talk, Todd brought forth cooked camas bulbs (*Camassia quamash*) and cous or biscuit-root (*Lomatium cous*), both important food sources for Native American tribes in the Palouse Prairie region. Members who sampled them noted their mildly sweet, starchy flavors. Todd warned against consuming uncooked camas, as the body cannot fully digest its polysaccharide, inulin, which causes gastric distress unless converted to fructose sugar by cooking. He related the story of Lewis and Clark's crew, who were so hungry once during their journeys that they ate uncooked camas and became wretchedly ill, an effect that Todd has personally confirmed.



Left: Ethnobotanist Todd Ott generates embers with a handmade bow drill. Right: Todd Ott blows flames from friction-ignited embers into native tinder (Nancy Miller photos).

The 2010 Annual Membership Meeting, called to order and chaired by President Wendy Velman, followed Todd's presentation with reports from various committees and news about upcoming events and transitions. Everyone present heartily applauded this year's White Pine Chapter Annual Meeting Committee members for their efforts in hosting the event. Valdon Hancock of the Loasa Chapter briefly discussed plans for the 2011 Annual Meeting on June 24, 25, and 26, at City of Rocks National Reserve and Castle Rock State Park, south of Burley, Idaho.

Wendy then described results and ideas from several new and ongoing INPS initiatives this spring, first announcing the community-based project recipients of ERIG grants and the new ERIG Committee coordinator, (see INPS News on page 17). She praised the successes of the inaugural Native Flora Workshop presented at Idaho State University, which drew almost 100 participants from herbaria, universities, and agencies in Idaho and nearby states. Originally intended to alternate in even-numbered years with the Rare Plant Conference held during odd-numbered years and hosted by the Pahove Chapter, Wendy suggested that the University of Idaho could convene the event in 2012.

Our president also proclaimed the establishment in Idaho Falls of the Upper Snake Chapter and its new board and full schedule of field trips, largely fostered by her organizing skills. At the Native Flora Workshop, INPS and the Sah-Wah-Be Chapter conferred the Lifetime Achievement Award to Dr. Karl Holte of Idaho State University, in recognition of his considerable years of service to the organization and his outstanding contributions to native plant conservation. Although INPS is losing its Sage Notes editor, Dylan Levy-Boyd, who has resigned and relocated to Fall 2010

Washington, the biggest news of the annual meeting emerged when Wendy announced that she will resign her presidency on November 1, before the birth of her third child. She requested that a Nominating Committee of five members from different chapters assemble soon and find candidates for the president and vice president positions.

Big Creek Field Trip

On Sunday morning, June 13, University of Idaho Stillinger Herbarium Collections Manager and Curator Pam Brunsfeld led field studies along a tributary of the St. Joe River. The Big Creek area lies within an ecosystem significant for its rich array of coastal disjunct species commonly found on the west side of the Cascade Mountains in Oregon and Washington. Various widely accepted theories surmise how these assemblages have developed since 30 million years ago, when temperate rainforests cloaked the rocky Idaho terrain bordering shallow, western seas. One theory asserts that glacial movements either isolated this community of plants or deposited debris and seeds from the western coast in the deep river canyons of the region. Another explanation postulates that the formation of the Cascades created different moisture and temperature regimes on either side of the range. The resulting eastern rain shadow brought drier and colder conditions over time, and many of the original species disappeared. However, several steep, low-elevation, warmer valleys, such as certain Clearwater River drainages, retained their “coastal” species during ensuing ice ages, climate changes, and the Northern Rockies upheaval that now captures ample Pacific precipitation.

In the overstory of the unusually cool, lush forests around Big Creek, we noticed disjunct species western redcedar (*Thuja plicata*) and western hemlock (*Tsuga heterophylla*), along with Douglas-fir (*Pseudotsuga menziesii*), grand fir (*Abies grandis*), and western white pine (*Pinus monticola*) throughout this inland refugium. The diverse shrub layer contained oceanspray (*Holodiscus discolor*), Rocky Mountain maple (*Acer glabrum*), red-osier dogwood (*Cornus sericea*), Scouler’s willow (*Salix scouleriana*), and *Prunus emarginata* var. *mollis*, the disjunct tree variety of bittercherry. Bracken, lady, and sword ferns (*Pteridium aquilinum*, *Athyrium filix-femina*, and *Polystichum munitum*) and abundant mosses filled the understories of the gentle slopes and stream terraces. Closer to the earth, broadleaf starflowers (*Trientalis latifolia*), clustered lady’s slippers (*Cypripedium fasciculatum*), white shooting stars (*Dodecatheon dentatum*), and the rare Constance’s bittercress (*Cardamine constancei*) bloomed later than usual, after the cool, wet spring.



A profusion of coastal disjunct species in rocky Big Creek terraces
(Nancy Miller photo)

After our hiking adventure and a short drive up the road that parallels Big Creek, Pam showed us profuse saxifrage species that she recently found growing in the cliffs and rock gardens towering over the drainage. These included *Saxifraga arguta*, *Saxifraga occidentalis* var. *idahoensis*, and a potential new taxon that most closely resembles *Saxifraga caespitosa* var. *subgemma* and has only been discovered in three small populations. Throughout this field trip, we reveled in the fresh colors and scents of spring all around us and delighted in observing plants that we would overlook without the guidance of such an intrepid botanist.



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Need help with planning?

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The Third Annual Idaho Botanical Foray

By Don Mansfield

From July 15 – 19, 2010, thirteen botanists from throughout the region gathered at the Custer #1 campground by Custer, ID on the Yankee Fork of the Salmon River to do what botanists love best—search for (and collect) plants. This was the Third Annual Idaho Botanical Foray, and, like the first two, resulted in plant presses full of roughly 500 different plant collections (most in triplicate). Though the first two forays were hosted by Jim Smith at Boise State University (which means one set of all those specimens are now in the BSU herbarium), this one was hosted by Don Mansfield at The College of Idaho.

Why, you might ask, would someone with interest in plants want to kill them, dig them up, dry them, glue them to paper and shove them into a cabinet (in a herbarium) ‘in perpetuity’? Of course, Ray Davis’ *Flora of Idaho* (1952) relied on voucher specimens, but do we still need to use that archaic and destructive technique? Yes! New species are continually being described, taxonomies are changing as new evolutionary relationships are discovered, and distributions are being better understood. All of this work relies heavily on *voucher* specimens, of the sort gathered and documented by the enthusiastic participants of the Idaho Botanical Forays. (ASIDE: Being one who writes floras, I spend a considerable amount of time tracking down reports of “observations” of plants. Without vouchers, a plant’s identity remains uncertain. With vouchers, it is possible to verify an identity. (Isn’t science wonderful?!)) My favorite example of verification, or lack thereof, was when I searched for several years for *Mitella breweri*, which had been reported from Steens Mountain and would have represented a considerable range extension. Ultimately, I found a herbarium specimen, neatly and completely labeled as *Mitella breweri* that included the top half of *Mitella pentandra* carefully glued so that its cut stem aligned precisely with the stem of the bottom half of *Saxifraga odontoloma*.)

Our group of intrepid plant collectors and their associates included: Kim Carlson, Barbara Ertter, and Don Mansfield (The College of Idaho), Jim Smith, Steve Martin, Craig Scott, Elaine Walker, and Jacob Cragin (Boise State University), Amanda Fisher her family (Idaho State University), Beth Corbin (Owyhee BLM), LaMar and Rosalie Orton (Twin Falls), and Josh & Wendy Irwin (University of Wyoming), and, of course, Prospero (the dog!). Josh and Wendy also brought Zip (the other dog) along.



Foray participants were (back row left to right) Don, Jim (and Prospero), Kim, Josh, Beth, Craig; (front row left to right) Barbara, Jacob, Elaine, Amanda (and family), Rosalie, and LaMar.

In addition, Dr. Pat Packard, emeritus professor of botany from The College of Idaho, who lives part-time in the Yankee Fork region and was part of the impetus for this year’s foray location, joined the group for some of our events. She also wrote a “road log” for participants (copies available from dmansfield@collegeofidaho.edu) in which she colorfully describes much of the lore and local history of the Yankee Fork region, where she grew up. (She told me, for example, when someone needed a doctor (1930s) you put everyone in the car, put a match stick in the horn, and put your foot to the floor.)

Of course, a highlight of the foray was the camaraderie in camp and on the trail. The Saturday night potluck featured everything from buffalo and rhubarb to quinoa and traditional soups.

On Friday, two groups drove in tandem up the Jordan Creek Road, “hopschotching” and stopping at diverse looking meadows, marshes, stream sides or seeps. On a lead from Michael Mancuso, we sought a watch list species-- *Astragalus paysonis* in riparian areas near an extirpated population under, what is now a rather large, active mine site. We found an *Astragalus* as yet to be determined just below the mine. Hmm. Other finds included *Ribes hudsonianum* and *Chenactis evermannii*. During lunch in a meadow below the switchback to Loon Creek summit the group found a curious spring-bowl with a raised marshy rim, of puzzling origin. Finds there included at least two *Platanthera*, a *Mitella*, *Ledum*, and *Sedum debile*. After lunch, half of the group (Don, Kim, Jim, and Steve) went up to Loon Creek Summit at the southern boundary of the Frank Church Wilderness, where Jim and Steve hiked west to find an odd *Lomatium/Cymopterus* which may be *L. idahoense*, *Sibbaldia procumbens*, *Allium simillimum*, and *Antennaria umbrinella* among other alpine taxa, and Don and Kim hiked east to find *Epilobium clavatum*, *Chionophila tweedyi*, a diminutive *Hieracium*, and a variety of rather xeric alpine grasses and sedges, including a *Piptatherum*. The other group (Barbara, LaMar, Rosalie, and Elaine) headed up towards Jordan Peak and decided that a second day in the region would be productive.

Friday evening more botanists arrived and on Saturday, we formed three groups. Don, Kim, LaMar and Rosalie met Dr. Packard and drove downriver to search between Clayton and Challis for *Pediocactus* populations and lower elevation taxa. Finding several populations and many interesting taxa in Malm Gulch, including several *Penstemon* species, *Oxytropis*, *Eriogonum verrucosum*, and *Opuntia polyacantha*, we headed back through Challis over the Custer Motorway to camp.

A second group on Saturday (Barbara, Beth, Josh and Wendy (with Zip), and Craig) followed the ATV trail along Jordan Creek to the headwater basin, then across talus up a steep path to the saddle south of Jordan Peak. Already lunchtime by then, they abandoned original plans to drop down to Lightning Lake. Beth, Craig, and Barbara returned by the same route, collecting in the basin (near spring and wet margins) and along the road, while Josh and Wendy went first to Jordan Peak, and then swung south along the ridge. Unexpected finds included *Antennaria flagellaris* and a subalpine form of *Antennaria dimorpha*.

Jim took the third group (including Elaine, Jacob, and Amanda) on the trail towards the Custer Mountain lookout collecting in openings and meadows of the Douglas fir and lodgepole pine forest.

On Sunday most people headed home, but one group (Jim, Elaine, Jacob, and Craig?) collected in open meadows and the riparian zone of the West Fork of the Yankee Fork, near Bonanza. Lower elevation taxa like *Horkelia fusca* and various *Potentilla* and *Drymocallis* species were encountered.

A second group (Beth, Josh, Don and Kim) spent the day hiking up Baldy Peak. Highlights of the hike included a nest of gaping chicks (see Josh Irwin’s Flickr site (<http://www.flickr.com/photos/walksonrocks/sets/72157624318955027/>), *Collomia debilis*, *Saxifraga*, *Hieracium*, *Valeriana*. The fierce wind on the summit made collecting *Carex* spp., *Ribes montigenum*, *Poa rupicola*, *Cryptogramma crista*, and other goodies rather challenging.

Most of the rest of the group returned Sunday night, but on Monday on our way out Kim and I looked to no avail for some limber pine populations on the “edge” of their range, which falls in the lower Yankee Fork. Though we didn’t find any, we found many taxa that I hadn’t seen earlier on the foray, reminding me that even with 13 pairs of eyes and legs, we barely sampled a small fraction of what is out there to discover. Years of botanizing lie ahead!

In keeping with prior forays, there will be identification workshops from October through April at both Boise State University and The College of Idaho. At these workshops, we will identify some of the hundreds of plants that were collected. If you would like to come to one or more of the workshops, please notify Don Mansfield ([dmansfield at collegeofidaho dot edu](mailto:dmansfield@collegeofidaho.edu)) or Jim Smith ([jfsmith at boiseestate dot edu](mailto:jfsmith@boisestate.edu)). Schedules and details are forthcoming.

Based on the success of the first three forays, we are hopeful that there will be a Fourth Annual Idaho Botanical Foray. As yet we do not yet know where it will be, or who will host it. Perhaps a southeastern Idaho or northern Idaho herbarium will host the event. In any case, this will be an event to be on the lookout for in 2011.

Hager Lake Workshop

An overnight workshop by White Pine Chapter July 10-11, 2010

By Archie George, Juanita Lichthardt & Fred Rabe

The White Pine Chapter organized a workshop to look at the current flora and aquatic invertebrate community at Hager Lake. Volunteers from the chapter and the Great Old Broads for Wilderness helped in the survey.

Rob Bursik in 1992 classified Hager Lake as a valley peatland, a relatively low elevation site in a major river valley. He described such peatlands as having numerous boreal species whose populations are disjunct by hundreds of miles from their main range in boreal regions of Canada.

The lake site supports 75 vascular plant and bryophyte species including five species considered rare in Idaho. Four other rare species were previously documented from the lake, but are now believed to be extirpated.

Juanita Lichthardt visited Hager Lake the day before we arrived and made some comparisons with plants observed in 1992 by Rob Bursik. Before we visited the mat, she explained what plants to look for there.

Different semi-aquatic fen communities are found at Hager Lake, the most distinct being rose spirea (*Spirea douglasii*), a tall, dense shrub encircling the lake basin. Lodgepole pine (*Pinus contorta*) and western white pine (*Pinus monticola*) are scattered

through the shrub carr. A second growth of conifers has occurred since 1992.

The middle of the basin north of the lake was covered by a rich fen community co-dominated by slender

sedge (*Carex lasiocarpa*) and rose spirea. Rich fens are restricted to areas underlain by calcareous rock and the water is more alkaline than in poor fens.

A floating mat about 2.5 acres encroaches on the south side of the lake. It is one of the most extensive mats in Idaho and the poor fen growing

on the mat is exceptional. Sphagnum moss cells, living in a wet environment, contain air which enables them to float. The sphagnum plants grow so close they form a cushiony mat and can easily support a couple of moose.

Some common vascular plants growing on the mat are blueberry (*Vaccinium oxycoccos*), shore sedge (*Carex limosa*) and laurel (*Kalmia microflora*).

Two insectivorous sundew species were present. Neither one was reported by Bursik in 1992, which is curious since *Drosera anglica* was abundant and easy to spot because of its sparkling glands. In fact, you couldn't avoid walking on it. Only one individual of *D. rotundifolia* was observed on the mat.

Sample cores have been taken, and the mat was aged at about 6,700 years old based on the presence of



Hager Lake, near Priest Lake Ranger Station, was formed about 12,000 years ago by retreating glaciers that left ice buried in the drift. The ice eventually melted leaving a depression 27 ft deep and 5 acres in size.

Mount Mazama tephra near the top of the lake sediments below the mat.



Sundew
(*Drosera anglica*)

A fixed sphagnum mat occurs north of the lake. It is characterized by intermediate fen vegetation. Dominant vascular species were slender sedge (*Carex lasiocarpa*), and dulichium (*Dulichium arundinaceum*). Bursik found two rare species in this community: inundated clubmoss (*Lycopodiella innundata*) and St. John's wort (*Hypericum majus*), a very small, low growing plant not seen. *Lycopodiella* is now considered a common species.



Class members picking invertebrates from samples collected along mat edge.

Only one aquatic plant was noted by the group, the rooted yellow water lily (*Nuphar polysepalum*). It is located in the shallows of the lake and appears to have increased in density. Water shield (*Brasenia schreberi*), floating pondweed (*Potamogeton natans*) and bur-reed (*Sparganium minimum*) observed on a 1987 trip were not seen. However, not much time was spent looking for macrophyte species.

Macroinvertebrates were sampled with a D-net dragging the net along the edge of the floating mat. In addition, a raft was used to collect invertebrates from amongst the yellow water lilies in the shallows.

That evening we stayed at the Priest River Experimental Forest, 13 miles northeast of the town of Priest River. It is managed by personnel at the Rocky Mountain Research Station in Moscow, Idaho. Located on the west slope of the Selkirk Mountains, two-thirds of the trees there are more than 120 years old. The site has a 15-acre nursery used for seed transfer experiments. In addition, two Research Natural Areas (RNAs) exist there for the study and preservation of undisturbed sites.

The residential facilities include a conference hall sleeping quarters, laboratory, kitchen, and dining hall. Most of these facilities are listed on the National Register of Historical Places.

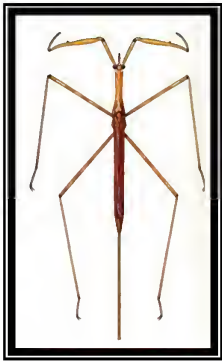
In August 1987, 26 aquatic insects and 7 non-insects were collected from Hagar Lake. This compared to 13 insects and 1 non-insect from the lake in July, 2010. All 14 species in 2010 were sampled from along the edge of the floating mat whereas only 4 of these occurred amongst the water lilies.

Most macroinvertebrates sampled were predators - dragonflies, damselflies, predaceous beetles, backswimmers and water scorpions. Dissecting scopes were used to identify these organisms.



Part of the group identified aquatic invertebrates sampled from the lake while the other members accompanied Juanita to observe plants. Then, some people switched roles.

Sunday, the group drove east on a windy road up to the Canyon Creek Research Natural Area and finally to the Gisborne Fire Lookout. The RNA established in 1937 is a near climax forest chiefly of western hemlock and western redcedar. Years ago, Nancy Savage and Fred Rabe collected macroinvertebrates in the stream there.



Water scorpion (*Ranatra fusca*)

Saturday evening Archie George gave us some background information about the Hager Lake site and how he and his wife Mary obtained it. In the spring of 1994 they sold a rental home in Moscow and were looking for some land in the region. They didn't want any buildings to maintain, but were drawn to places that had interesting plants and animals.

The Georges contacted The Nature Conservancy of Idaho (TNC) to see if they knew of any place the owners wanted protected but was not high enough priority for TNC to protect. The TNC response was - that "lots of people were looking for land in Idaho, especially forested areas with riparian habitat."

Several weeks later Archie and Mary were negotiating on a piece of farm ground when they got a call from TNC wondering if they might be interested in property north of Priest River, a special site TNC wanted to see preserved. They had been dealing with the US Forest Service (USFS), but the land managers for the region were not willing to accept restrictions on use of the property, so TNC was searching for conservation buyers.

On Valentine's day Archie drove to the property and walked around on snowshoes. There was about three feet of snow on the ground and it was snowing hard, but the lake, fen and trees proved to be too awesome an ecosystem to overlook.

Five years later, after paying off the loan, they donated a conservation easement. In the meantime

the Georges had worked with TNC and Bonner County on a timber management agreement, which was probably the first conservation easement TNC Idaho had agreed upon.

The Georges also obtained rights to protect water in Hager Lake as "aesthetic storage" for wildlife. Working with Jill Cobb at the USFS Priest Lake Ranger District, TNC consultant Rob Bursick, and the Army Corps of Engineers they designed and built a small dam in a ditch dug decades ago to lower the water level in Hager Lake as part of an effort to convert the wetlands to farm ground. Archie began taking water level readings in 1994.

Years later, when the neighbor decided to begin a massive gravel mining and asphalt batch mixing plant, these records proved very helpful in establishing the baseline water table in the area. Currently there is a lot of activity in the gravel pit, but the neighbors are required to monitor hydrology of the site.

Beaver established residence the last several years on the eastern edge of the lake and floating mat. An old lodge and dried sticks provide evidence of previous occupancy there. Often, the animals move on if they diminish their food resource of shrubs and trees. The pattern at Hager Lake appears to follow a typical 20 to 30 year cycle similar to other sites in northern Idaho.

Several years ago, TNC Idaho transferred their conservation easement to the Inland NW Land Trust (INLT) in Spokane who have continued to monitor terms of the easement with annual visits. If they were to live forever, Archie and Mary are confident that no ecological harm would come to this special place.

However, the property will eventually be owned by someone else and the Georges have confidence that INLT will insure that new owners abide by the restrictions protecting plants and wildlife.

The easement stipulates that one small residence and a couple of outbuildings can be built on the property and timber outside of a 200 foot buffer zone can be managed for periodic harvest and still protect wildlife. Most of the property is off limits to any kind of motorized activity. As Archie says, "it's like having a small wilderness area."

INPS NEWS

2010 ERIG Grants Awarded

By Michael Mancuso

The INPS Education, Research, and Inventory Grant (ERIG) Program for 2010 awarded a total of \$1,000 to four recipients. The four projects receiving ERIG money included:

1. Native Plant Riparian Buffer Demonstration Site: Dover, Idaho. Grant money will be used to install an interpretative sign and individual plant species markers at the Native Plant Riparian Buffer Demonstration site in Dover, and to have educational brochures printed. The recipient of the award was Gail Bolin, from Moscow, Idaho.

2. Introducing Elementary School Students to the Native Plants of the Palouse Prairie. Grant money will be used to purchase copies of herbarium specimens for teaching purposes and plants for the school garden. The recipient of the award was the Palouse Prairie School, Moscow, Idaho.

3. Landscaping with Native Plants in Northern Idaho: An Illustrated Guide. Grant money will go towards printing costs for the Guide. The recipient of the award was the Kinnikinnick Native Plant Society, Sandpoint, Idaho.

4. Study of a Peatland Ecosystem. Grant money will be used to help defray travel costs and booklet production associated with the project. The recipient of the award was Dr. Fred Rabe, Moscow, Idaho.

All of these projects have a strong educational component and reflect the mission of the INPS. One of the responsibilities for receiving an ERIG is to submit an article to Sage Notes describing the purpose and results of the projects. So stay tuned to hear more about each of these projects in the future.

Janet Bala will be replacing Michael Mancuso as the coordinator of the ERIG Committee.

Sage Notes Seeks a New Editor

Longtime Sage Notes editor Dylan Levy-Boyd has moved to Washington and needs to be replaced. The Society's newsletter is a vital resource for keeping members connected and abreast of native plant happenings in Idaho. Being editor is not a hard job, really. The hard work is done by the dedicated members and INPS state and chapter officers who write and submit stories and updates. The editor's duties entail compiling, formatting and type-editing the articles that are submitted. The hardest part is layout, but this just takes some practice and attention to consistency. The editor is also responsible for making arrangements to have the newsletter printed and mailed. The Sage Notes editor receives a stipend for publishing the newsletter on time; the amount received is determined by the board. If you are interested in assuming this position and have word processing skills, then please contact [info3 at idahonativeplants dot org](mailto:info3@idahonativeplants.org) for more information.

Advertise in *Sage Notes*

Advertisements to help support Sage Notes. If you would like to reach environmentally minded, native plant loving customers, please consider taking out an ad in our next issue. Prices are: \$5 for 1/8 page, \$8 for 1/4 page, \$15 for 1/2 page, and \$25 for full page. Ads should be electronic (JPEG, TIFF, publisher) and sent to the editor. Payment should be sent separately to P.O. Box. 9451, Boise ID, 83707.

Minutes from the 2010 Annual Meeting of the Membership chaired by Wendy Velman

**Heyburn State Park, Idaho
Saturday, June 12, 2010**

Minutes submitted by Nancy Miller, Secretary. The meeting was called to order by Wendy Velman after the membership dinner and the presentation by ethnobotanist and University of Idaho graduate student Todd Ott. There was no treasurer's report.

Committee reports

Annual Meeting Committee: 2010 Annual Meeting at Heyburn State Park has been a success with

participants from all over the State. The White Pine committee was thanked for their efforts in hosting the meeting. Valdon Hancock of Loasa chapter discussed the 2011 Annual Meeting which will be held at City of Rocks National Reserve / Castle Rock State Park, south of Burley, Idaho, the 4th weekend of June, the weekend after Father's Day. More information will be posted in Sage Notes and on the state website.

ERIG Committee: Janet Bala will be the new coordinator of the ERIG committee. Most of the grants this year were community based. See page 17 of this issue for details.

- Native Plant Riparian Buffer Demonstration Site interpretive signs, plant markers and brochures; Dover, Idaho; Gail Bolin; \$270
- Introduction to Palouse Prairie Natives for Elementary Students; Palouse Prairie School, Moscow Idaho; \$200
- Landscaping with Natives, An illustrated guide; Kinnikinnick Native Plant Society; Sandpoint Idaho; \$230
- Peatland Ecosystem Study; Dr. Fred Rabe; Moscow, Idaho; \$300

Native Flora Workshop: Nearly 100 people attended and it was very successful. Many university, herbaria and agency people were in attendance from Idaho and nearby states. ISU provided some facilities at no charge. The workshop cleared \$1900 of which \$1000 will go into the ERIG fund and \$500 will go to Sah-Wah-Be chapter for their work in hosting the workshop. This workshop may be held in alternate years (even) now that the Rare Plant Conference is held in alternate years (odd). The Rare Plant Conference is generally held during the week of Valentine's Day and is hosted by Pahove chapter. Pam Brunsfeld of the UI Stillinger Herbarium has been approached regarding hosting the Native Flora Workshop or something similar in 2012. She reported that after finals week is a better time for UI to host than is spring break.

Sage Notes Committee: The Sage Notes editor Dylan Levy-Boyd has resigned and left Idaho. He is willing to help in the transition. A new Sage Notes editor is being sought.

Life Membership Achievement Award: This award was presented to Dr. Karl Holte of Idaho State University at the Native Flora Workshop. More details will be in Sage Notes.

Membership Committee: The INPS has a new chapter in Idaho Falls. It is the Upper Snake chapter and the new president is Susan Braastad who is in attendance at the annual meeting. Thanks to Wendy Velman for her work in helping to establish the chapter from the first introductory meeting to the full schedule of field trips for this summer.

Nominating Committee: Wendy announced that she is stepping down as president of INPS as of the first of November as she and her husband are expecting a third child. As the Vice President position is currently vacant, the committee will need to find candidates for both positions. The committee shall consist of three INPS members, only one of which may be a Board of Directors member.

The meeting was adjourned.

CHAPTER NEWS

Calypso Chapter

The Calypso Chapter meets on the first Wednesday of March, April, May and October. Field trips are scheduled during the spring, summer, and fall.

Vice President Roland Craft has resigned. The chapter is actively searching for a replacement. Field trips still are being attended.

PREVIOUS EVENTS

On May 2, 2010, the Chapter made its first excursion to Lost Lake. Lost Lake is on the peninsula east of Sagle. It is located near Gamlin Lake which the Chapter has visited on previous occasions. Despite its proximity, the Lost Lake area is an entirely different ecosystem from Gamlin Lake. A plant list was initiated and will be added to if the Chapter chooses to make more excursions to this area. Lost Lake is just a short distance from the Mineral Point area and is connected to it by trail. The group enjoyed lunching at the lake while sitting on the rustic wooden benches that are scattered in the area. A variety of water birds were observed and identified by two of the Audubon Society members within our ranks.

On May 16, 2010, the Chapter made a field trip to Liberty Lake to observe a diverse assemblage of riparian and upland plants. The majority of the Liberty Lake property was farm and forest land

donated to Spokane County. The County has since purchased additional land to expand the area to over 3,000 acres. The property contains numerous well-maintained trails. A high elevation stream cascades down natural waterfalls and through a canyon area before running through the flats on the edge of Liberty Lake. Beaver live unfettered and have made several dams and lodges in the lower areas of the stream, flooding more of the flat land. Moose and other wildlife take advantage of the ponds the beavers have formed.

On July 25, 2010, the Chapter made a field trip to one of its favorite areas, Roman Nose Lake. Unfortunately, one group had to return to town with mechanical problems. Over the years a plant list has been developed for the area. Roman Nose Lake borders the Sundance Fire that burned hundreds of acres of timber in the mid 1960's. Watching the re-growth of the area has been of interest to the Chapter. There is a scenic pathway with signs about the fire and the native flora. The lower lake is handicapped accessible.

UPCOMING EVENTS

October 6, 2010 – Chapter meeting. Details TBA.

Loasa Chapter

All INPS members and the public are welcome to attend Loasa's events. Meetings are held the third Thursday of each month in room 258 of the Taylor Building at CSI. If interested or for further details, contact Kelvin Jones at (208) 886-7051.

PREVIOUS EVENTS

Loasa went on two fieldtrips over the spring/summer. The first, to the Little City of Rocks near Gooding, Idaho in late May was brief and cool. Plants were just beginning to emerge following the prolonged wintery weather, and identification of the tender shoots was challenging. A 4WD vehicle is recommended for those interested in exploring these beautiful basalt canyons.

Our second trip in late June was to the City of Rocks National Preserve/ Castle Rocks State Park, Albion, Idaho. This was a reconnaissance mission to scout out the facilities, trails, and plant communities for the 2011 Annual Meeting. We had a wonderful time and look forward to see everyone here on the fourth weekend in June 2011.

Pahove Chapter

The Pahove Chapter hosts monthly presentations from September through April, usually on the 3rd Thursday of the month in the MK Nature Center Auditorium (with few exceptions). The address is 601 South Walnut in Boise. For more information please visit the website, <http://www.idahonativeplants.org/> or contact Susan Ziebarth sziebarth@idfg.idaho.gov.



Baby bitterroots (*Lewisia rediviva*).

A bitterroot is born.

Bill Addington, former Pahove-Chapter Vice President and proprietor of Taste the Wild plant nursery (www.tastethewild.net) enjoyed a long awaited success this year and shared the above photos and this story. Bill says "It's been about six years in the making, and has finally achieved fruition. It is a tiny little plant whose roots were consumed by Native Americans. First described and named by the Lewis and Clark party, it is the *Lewisia*."

"Many of us see *Lewisia* often enough to consider it common. However, those of us who do see it would have to agree that they are very difficult to find once the flowers have faded and seed has matured. I would consider it quite an accident that I ran across a few of these mature seeds in the Squaw creek drainage in the Owyhee's."

"It was midsummer of 2004 when I stumbled upon these tiny little gems. I planted the seed and it came right up the following spring, but only to appear as a baby onion. Years later it has matured into some fine little plants and this spring finally rewarded me with some awesome flowers."

"As native enthusiasts we all know about the culinary value placed on them by the Native Americans and the importance they have had in history. However, on a personal note for me I found that they were the

flower my mom's family would pick for Memorial Day to adorn the graves of loved ones in Salmon. She said they were the only thing really blooming well at that time and were easily plucked and placed. These little jewels really made a significant batch of mixed memories surface for her and grandma, as they were also the last flowers placed on grandpa's resting spot there." Congratulations Bill!

UPCOMING EVENTS

September 16, 2010 – Pahove Chapter Season

Kick-off Pizza Party: Join us once again at the Idaho Botanical Garden for our autumn meet, greet and eat. You will receive a postcard with more details the first week of September.

October 21, 2010 – Firewise Landscaping: The key to creating a firewise landscape around your home is to provide "defensible space." In other words, you increase the odds of surviving a wildfire by managing the fuel around your property. Brett VanPaepeghem has been an integral part of the development of the BLM Firewise Garden near IBG. He will take us on a tour of the garden and share his knowledge so that we can learn how to create defensible space in our own yards by using fire resistant native and non native plant materials. (The BLM and BSU Horticulture Department have partnered to develop and maintain the Firewise Garden).

November 1, 2010 – Popcorn and a Movie: Relax, have some popcorn and a warm beverage at movie night! The film TBA.

Sah-Wah-Be Chapter

PREVIOUS EVENTS

Deep Creek Mountains South of Pocatello: Ruth Moorhead and six other brave adventurers traveled first to Cherry Springs southwest of Pocatello on Saturday, July 10, to review the familiar plants on the south trail. After about an hour the group, including Dick Anderson, Janet Faith, Linda Johnson, Shirley Rogers, Roger Harrer, and Peggy Harrer with her little dog Willie, caravanned on up Mink Creek, over Crystal Summit and across Arbon Valley to Knox Canyon in the Deep Creek Range. During a pleasant walk up a shady lane along the creek, the party compared the flora of this location to that at Cherry Springs, and noticed a surprising variety of species not found at the first stop. A young red-tailed hawk sitting next to the nest, and numerous swallows on

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and around the cliffs above surveyed our progress. After a relaxed group picnic on a grassy slope, Ruth, Peggy and Roger continued up to the pass and explored some of the higher elevation flora, while enjoying beautiful mountain vistas. All agreed it was a very pleasant outing.

UPCOMING EVENTS

September 25, 2010 – Goodenough Canyon, Fall colors & Chili Potluck.

PROGRAM SCHEDULE

All classroom meetings are held at 7:00PM in classroom 114, Plant Science (PLSC) Bldg 69, ISU, Pocatello. The public is welcome. For more information call 208-716-0218.

October 4, 2010 – Monday evening meeting.

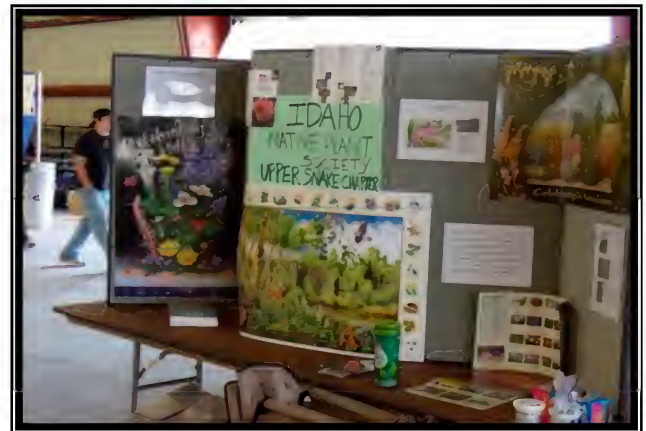
November 8, 2010 – Monday evening meeting.

December 4 or 6, 2010 – There will either be a party on the 4th, or a classroom meeting on the 6th, stay tuned for details.

January 10, 2011 – Monday evening meeting.

Upper Snake Chapter

PREVIOUS EVENTS



Upper Snake Chapter booth at the Earth Day event at Tautphaus Park on April 24, 2010.

April 21, 2010 – For our last regular meeting of the year Matt Hill presented on the current plans for Ryder Park, a part of the Snake River Landing project. This is a park that the city would like to have at least a portion of restored to native vegetation. The

Chapter decided to become involved, in advisory and/or cheap labor capacities. Suzanne Miller will be our liaison on the committee. We also made pots from newspapers for the upcoming Earth Day event.

April 24, 2010 – Earth Day at Tautphaus Park. Volunteers at the booth kept busy helping children and adults plant seeds in the biodegradable pots that we had made at our previous meeting. We gave out seeds for seven native species including Indian rice grass (*Achnatherum hymenoides*) and arrowleaf balsamroot (*Balsamorhiza sagittata*), and discussed



Upper Snake Chapter members bundled up for a spring hike around North Menan Butte.

the virtues of native plants with a genuinely interested public.

May 1, 2010 - North Menan Butte Hike. We braved a brisk early spring day. Still, there was a surprising payoff in the number of species of plants found. Mark and Donna Whitham led the group up and



Native plant enthusiasts overrun the Hell's Half Acre rest stop on I-15.

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around the butte so we could explore the unique geology and learn about spring plants.

May 19, 2010 – Hell's Half Acre rest stop on I-15. Almost 40 people showed up on a beautiful spring evening to look at the resident wildflowers. Wendy Velman kept the crowd engrossed in the finer distinctions of the native plants for more than 2 hours.

June 2, 2010 – Cress Creek Trail. Leader Wendy Velman led the group on a tour of the unique plants in this habitat.

June 23, 2010 – Evening Primroses at St. Anthony Dunes. Alan and Alice Crockett led a group up into the dunes. We dodged 4-wheelers and found a cozy blowout or two to watch the evening primroses open up. It was a lovely evening and we watched as many primroses opened up, but alas, no moths.

June 26, 2010 – Birch Creek Valley/Foothills of the Lemhi Mountains. A sunny day brought out the enthusiasts to check out marsh plants by the creek and completely different plants on the dry hillsides a few feet away. Among many others, we found 3 species of vagrant lichen and blue-eyed grass. It was interesting to check out the Charcoal Kilns and learn about the history of the area. Many thanks to leaders Rose Lehman and Wendy Velman.



Upper Snake Chapter members on a June field trip to the foothills of the Lemhi Mountains.

June 24, 2010 – Wood's Creek Fen near Driggs, Idaho. Many members of the Wyoming Native Plant Society (WNPS, Teton Chapter), Teton Regional

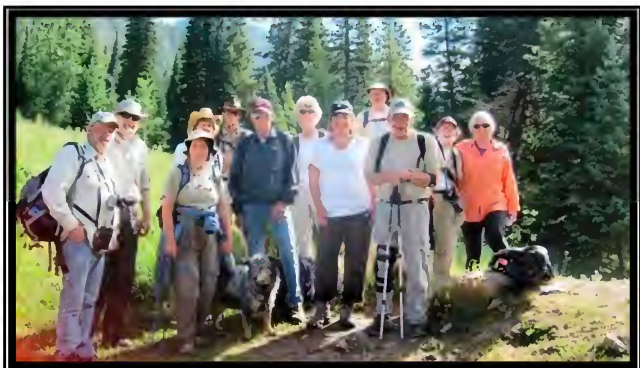
Land Trust and the Upper Snake Chapter enjoyed an afternoon of tromping around a unique peatland community. Wood's Creek Fen is a treasure – a rare calcareous fen that supports dynamic biodiversity and many rare plants. Many thanks to wetland ecologist Natalie Kashi and Dr. Michael Merigiano for leading the large crowd that attended.



Charcoal kilns in the Birch Creek Valley/Foothills of the Lemhi Mountains.

June 25, 2010 – Squirrel Meadows Area east of Ashton, Idaho. Klara Varga led this trip for both the WNPS, Teton Chapter and the INPS. We learned and discussed many plants around the Squirrel Meadows cabin and a unique fen/wetland community in the area, but most of all we had a great time sharing a great place with super cool people!

July 31, 2010 – Darby Canyon, Teton. Members of the Wyoming Native Plant Society (Teton Chapter) and the INPS (Upper Snake and Sah-Wah-Be Chapters) enjoyed a hike to the wind cave with Amy Taylor, Rose Lehman and Kelley Coburn jointly leading the hike. Parry's primrose (*Primula parryi*) was one of the eye treats at the base of the cave that greeted the hikers.



Members of the INPS and WNPS stop for a photo during their hike in Darby Canyon.

UPCOMING EVENTS

September 7, 2010 – Potluck and planning meeting at Sue Braastad's house.

White Pine Chapter

The members and officers of the INPS White Pine Chapter extend our sincere gratitude to each of the speakers, field trip leaders, and event hosts who so graciously are sharing their knowledge, time, talents, and skills with us this year. For more information about any of the events outlined here, please visit the chapter website at www.whitepineinps.org or contact Helen Yost at helen_yost@hotmail.com or Elisabeth Brackney at elisabeth_dot_brackney_at_gmail_dot_com.

PREVIOUS EVENTS

Idaho Peatlands Presentation

At our monthly meeting on Thursday evening, May 13, aquatic ecologist and retired University of Idaho professor Fred Rabe offered slides and descriptions of regional peatland ecosystems to increase awareness of their outstanding educational and resource values. Co-sponsored by Friends of the Clearwater, Dr. Rabe's presentation served as an informational and promotional primer for summer field workshops hosted by both organizations at 49 Meadows and Hager Lake. Drawing on his earlier, collaborative studies of over 50 northern Rocky Mountain wetland sites, Fred amazed the approximately 30 members and guests at the 1912 Center in Moscow with intricate details about the formation and hydrology of peatlands, their invertebrates and vascular and non-vascular flora, and how scientists sample peatland components and classify their aquatic and semi-aquatic zones.

Turnbull National Wildlife Refuge Field Trip

On Saturday morning, May 22, 16 participants carpooled from Moscow to near Cheney, Washington, to witness the diverse floral and faunal species found in the unique Channeled Scablands ecosystem at Turnbull. At the peak of the spring bloom, refuge biologist Mike Rule led us through mima mound prairies to vernal pools where we observed the federally listed threatened species, water howellia (*Howellia aquatilis*). Mike explained how volcanoes, glaciers, and the largest-ever floods at the close of the last ice age formed the refuge's rare

mosaic of basalt outcrops, canyons, and over 130 wetlands that provide important, high-quality habitat. After our guided tour, we explored the riparian areas, grasslands, ponderosa pine forests, and wetlands via trails, boardwalks, and a motorized route and saw abundant bitterroot, arrowleaf balsamroot, recent wind throw, and a family of trumpeter swans.

Thorn Creek Native Seed Farm Tour

Amid scattered spring showers on Thursday evening, June 17, restorationist Jacie Jensen and 14 chapter members visited seed production plots and fields and walked ancient Palouse prairie on her extensive third-generation farm atop Paradise Ridge near Genesee. Jacie described how her family collects and propagates grass and wildflower seeds of 25 common Palouse species from on-site sources and then harvests resulting seeds to either sell, plant in pots, or sow into single-species fields. Because we recognize both the rarity and beauty of small and isolated remnants of highly diverse native Palouse prairie, we were glad to learn from the Jensens' experience and knowledge, share our collective concern for the regional landscape, and foster the conservation and expansion of arid, short-grass prairie patches through rural and urban cultivation of native plants.

Radio Broadcast of Idaho Peatlands Presentation

To promote the recent and successful Hager Lake Peatland Workshop and to inform regional citizens about our biologically diverse landscape, Radio Free Moscow (KRFP 92.5 FM) aired the first 30 minutes of Fred Rabe's May 13 talk on its July 5 Evening Report. As outlined above and on the White Pine website, aquatic ecologist Rabe described northern Rockies peatland ecosystems through his presentation that prepared participants for summer field workshops sponsored by Friends of the Clearwater and INPS at 49 Meadows in June and at Hager Lake in July. If you missed this lecture, broadcast, or the workshops, you can learn more about Idaho peatlands by listening to the KRFP program at <http://radiofreemoscow.org/2010/07/>. Other recorded White Pine presentations will also be published on the web soon.

Hager Lake Peatland Workshop

Under the tutelage of aquatic ecologist Fred Rabe, botanist Juanita Lichthardt, and landowner Archie George, a dozen people participated in a weekend field trip on July 10 and 11, near Priest River, Idaho. On foot and in a rubber raft on Saturday, we studied

and collected macroinvertebrates and vascular, non-vascular, and rare plants on and along the edge of the Hager Lake fen and its floating sphagnum moss mat. That evening, we enjoyed discussion, camaraderie, and full accommodations at the nearby Priest River Experimental Forest lodge, with group meals provided by accompanying members of the Palouse Broadband of the Great Old Broads for Wilderness. Throughout Sunday, we discovered the exceptional diversity of plant life along elevational gradients in two research natural areas within the experimental forest, from the depths of the Wellner Cliffs woods to the heights of the Canyon Creek lookout, where we viewed lush northern Idaho panoramas and a few whitebark pines.

Square Mountain Research Natural Area Field Trip

On Saturday, July 31, Nez Perce National Forest botanist Mike Hays led 18 participants from across north-central Idaho through daylong field identification of numerous native forbs, grasses, and sedges growing in habitats ranging from wet meadows and dense water sedge communities to subalpine parklands high in the Gospel Hump Wilderness. During several forays into the moist grasslands and forests along the Grangeville-Salmon Road and the steep, narrow route to Square Mountain, we observed globe penstemons, meadow senecios, marsh marigolds, boggy mosses, and rare broadfruit mariposas. Among the spectacular peaks of the Clearwater-Salmon divide, we examined sparse vegetation in the thin, coarse soils and exposed, rocky substrate of 8,020 ft. Square Mountain. Beneath whitebark pine and subalpine fir, we found the brilliant summer blooms of arnica, fleece flower, penstemon, yellow buckwheat, phlox, and the regionally endemic Idaho douglasia (*Douglasia idahoensis*).

UPCOMING EVENTS

Please check the INPS White Pine website often at www.whitepineinps.org or contact chapter officers for ongoing updates of scheduled events and activities.

Wood River Chapter

Contact chapter president Carol Blackburn at [blackburncr1 at yahoo dot com](mailto:blackburncr1@yahoo.com) for possible activities and gatherings.



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ADDRESS SERVICE REQUESTED

Sage Notes is published four times a year in February, May, September, and December by the Idaho Native Plant Society, incorporated since 1977, under the laws of the State of Idaho. Editor, VACANT. **Newsletter ads:** personal ads \$2; commercial ads \$5 for 1/8 page, \$8 for 1/4 page, \$15 for 1/2 page, and \$25 for full page. Ads should be sent with payment. **Submissions:** members and others are invited to submit material for publication. Articles in any form, even hand-written, are welcome, as is art work. Please provide a phone number in case there are questions. Material will not be returned. Send submissions directly to P.O. Box 9451, Boise, ID 83707, or [info3 at idahonativeplants dot org](mailto:info3@idahonativeplants.org). Submission deadlines are January 8, April 1, August 1, and November 1.

Officers: President, Wendy Velman; Vice President, VACANT; Secretary, Nancy Miller; Treasurer, Jody Hull; Member-at-large, Mel Nicholls.

Calypso Chapter, P.O. Box 331, Careywood, ID 83809. President, VACANT; Vice President, VACANT; Secretary, Gloria Wurm; Treasurer, Janet Benoit; Newsletter, Phil Hruskocy. **Loasa Chapter**, 340 E 520 N, Shoshone, ID 83352. President, Kelvin Jones; Vice President, LaMar Orton; Secretary, Lois Rohay; Treasurer, Steve Paulsen. **Pahove Chapter**, PO Box 9451, Boise, ID 83707. President, Susan Ziebarth; Vice President, VACANT; Secretary, Karie Pappani; Treasurer, Jody Hull; Conservation, Chris Colson; Member-at-large, Cyndi Coulter. **Sah-Wah-Be Chapter**, 146 South 17th Avenue, Pocatello, ID 83201. President, Linda Johnson; Vice Presidents, Bob McCoy and Chris McCoy; Secretary, Barbara Nicholls; Treasurer, Cathy Frischmann; News, Ardys Holte; Members-at-Large, Mel Nicholls, Karl Holte, Dick Anderson, Janet Bala, Judy Minshall. **Upper Snake Chapter**, President, Sue Braastad; Vice President, Rose Lehman; Secretary, Alan Crockett; Treasurer, Heidi Heyrend. **White Pine Chapter**, PO Box 8481, Moscow, ID 83843. President, Helen Yost; Vice President, Elisabeth Brackney; Secretary, Patricia Hine; Treasurer, Nancy Sprague; Newsletter Editor, Michele Leavitt; Landscaping and Restoration Plants, Juanita Lichthardt; Publicity Chair, Margaret Ely; Website Editor, Nancy Miller; Past Co-Presidents, Janet Campbell & Nancy Miller. **Wood River Chapter**, PO Box 3093, Hailey, ID 83333. President, Carol Blackburn; Vice President, VACANT; Secretary, VACANT; Treasurer, VACANT.

The Idaho Native Plant Society (INPS) is dedicated to promoting interest in native plants and plant communities and to collecting and sharing information on all phases of the botany of native plants in Idaho, including educating the public to the values of the native flora and its habitats. In keeping with our mission, it is the intent of the INPS to educate its membership and the public about current conservation issues that affect Idaho's native flora and habitats. **Membership** is open to anyone interested in our native flora. Dues are payable annually in December. Send dues to Jody Hull, INPS Treasurer, Box 9451, Boise, ID 83707. Website address: IdahoNativePlants.org.

Category	2010 Annual Dues
☐ Patron	\$100
☐ Sustaining	\$35+
☐ Individual	\$17
☐ Household *	\$22
☐ Student	\$10
☐ Senior Citizen	\$10

Name _____
Address _____
City/State _____
Zip _____ Telephone _____
E-mail _____

Chapter affiliation? (check one)

☐ Calypso (Coeur d'Alene; please include \$6 newsletter dues)
☐ Loasa (Twin Falls) ☐ Pahove (Boise)
☐ Sah-Wah-Be (SE Idaho) ☐ Upper Snake (Idaho Falls)
☐ White Pine (Moscow)
☐ Wood River (Ketchum-Sun Valley)
☐ None. Those who do not live near a chapter are encouraged to join. We can put you in touch with other members in your area, and can coordinate with you on any state level activities you may wish to be involved in.

*Household memberships are allocated two votes.